



ELECTRONICS  
DESIGN &  
MANUFACTURING

# *Solution-16*

## *Quick Reference Guide*

ISSUE 1.20



# *Solution- 16*

## **Quick Reference Guide**

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Firmware Revision 1.40

Hardware Revision F

Alarm Link Form - Software Version 1.10 = SOL16\_11

Software Version 1.20 = SOL16\_12

Software Version 1.3x = SOL16\_13

Software Version 1.40 = SOL16\_14

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## Introduction

Thankyou for choosing the *Solution- 16* control panel for your installation. We are sure that you will find this system extremely flexible, reliable and easy to use.

Before using the system for the first time, we suggest that you read the section in this Quick Reference Guide called “Programming Using The Remote Codepad” to familiarise yourself with the basic programming methodology.

The Quick Reference Guide is supplied with the *Solution- 16* control panel to provide users with enough basic information to wire, configure and operate the system. Due to the systems many programmable features and options we suggest that you obtain the complete Installation Manual which provides detailed information on all system options and functions as well as detailed information on the numerous programming methods.

## Programming

The programming options of this system are stored in a non-volatile EPROM. This memory will hold all the relevant configuration and user specific data even during a total power loss.

The data retention time is as long as ten years without power, therefore no reprogramming will be required after powering the system down.

The data can be altered as many times as required without the need for any additional specialised equipment. This memory is laid out in numerous locations, each of which holds the data for a specific function. In general, the entire programming sequence will consist of nominating the location then entering or changing the required data. You will repeat this procedure until all the data has been changed to suit your requirements. The factory default settings have been selected for Contact ID format.



**'15' is the maximum value that can be programmed into any location.**

There are two programming modes. The Installer's Programming Mode and the Operators Programming Mode. Both modes have individual access codes and these two codes must always be programmed differently. The Master Code, as well as being able to arm and disarm the system gives access to the Operators Programming Mode. The Installer's Code only gives access to the Installer's Programming Mode and does NOT arm and disarm the system.

Programming of the *Solution- 16* control panel can be carried out via any of the following five methods.

- System Codepad
- Hand Held Programmer (CC814)
- Programming Key (CC891)
- Alarm Link (Upload/Download) Software (CC816)
- DTMF Command Module (CC886)



**For further information on the different programming options available for the *Solution- 16* control panel, refer to the Installation Manual (MA880I).**

## Programming Using The Remote Codepad

The system must be in the disarmed state with no flashing zone alarm memories, this can be achieved by entering the **MASTER CODE** followed by the **AWAY** button. The factory default Master Code is **2580**.

To access the Installer's Programming Mode, enter the four digit **INSTALLER CODE** followed by the **AWAY** button. The factory default Installer Code is **1234**. Three beeps will be heard and both the AWAY and the STAY indicators will flash simultaneously. If a long beep is heard, check the system for alarm memory. The codepad indicators will display the current data stored in the first location (LOCATION 000).

Data Value	Zone 1 Indicator	Zone 2 Indicator	Zone 3 Indicator	Zone 4 Indicator	Zone 5 Indicator	Zone 6 Indicator	Zone 7 Indicator	Zone 8 Indicator	MAINS Indicator
0									
1	✓								
2		✓							
3			✓						
4				✓					
5					✓				
6						✓			
7							✓		
8								✓	
9	✓							✓	
10									✓
11	✓								✓
12		✓							✓
13			✓						✓
14				✓					✓
15					✓				✓

Table 1: Zone Indicators When Programming

### Example

To enter Installer's Programming Mode, enter the **INSTALLER CODE** followed by the **AWAY** button. Three beeps will be heard and the codepad will display the current data stored in "LOCATION 000".

To move to a particular programming location, enter the **LOCATION NUMBER** required followed by the **AWAY** button. The data of the new location will now be displayed.

To move to the next location, press the **AWAY** button. This will step you to the next location and the data in that location will be displayed via the ZONE indicators.

If you press the **STAY** button without previously entering a location number, the system will step back one location. To change data in the current location, enter the new value (0 – 15) followed by the **STAY** button. This will store the new data into the location and still leave you positioned at the same location.

To proceed to the next location, press the **AWAY** button. The next locations data will now be displayed.

To exit the Installer's Programming Mode, enter command **960** followed by the **AWAY** button. Two beeps will be heard and the system will return to the disarmed state.

**For a more detailed explanation, refer to the *Solution- 16 Installation Manual (MA880I)*.**

## Quick Start

The following steps will enable you to use the *Solution- 16* control panel with the default values as set in the factory. The factory default settings will allow the control panel to communicate in Contact ID format.

1. Connect AC plug pack to the control panel.
2. Check the operation of the red overload LED (LD1) on the PCB. In normal operation the LED will not illuminate. The MAINS indicator will remain on, as will the AWAY indicator. The unit is now in the armed state.
3. Enter the factory default Master Code **2580** followed by the  button. The AWAY indicator will extinguish. The control panel is now in the disarmed state. Installer's Programming Mode can now be accessed.
4. The back-up battery should now be connected.
5. Enter the factory default Installer Code **1234** followed by the  button. The STAY and AWAY indicators will now flash simultaneously.
6. Enter the Primary Telephone Number followed by the Secondary Telephone Number and the Subscriber ID Number.
7. Set the time for the test reports if this option is required. Any other programming changes required can also be made, otherwise the factory default settings will be used.
8. Enter command **960** followed by the  button to exit Installer's Programming Mode. The control panel will return to the disarmed state and is now ready for use.
9. Use the Master Code to set the date and time.

### How To Set The New Date and Time

1. Enter your  followed by **6** and the  button. Three beeps will be heard and the STAY and AWAY indicators will begin to flash.
2. Enter the day, month, year, hour and minute using the (DD, MM, YY, HH, MM) format.
3. Press the  button when finished. Two beeps will be heard and the STAY and AWAY indicators will extinguish.

## Zone Default Settings

The default zone settings are as listed in the table below.

Zone No	Zone Type
<b>1</b>	Delay 1
<b>2, 3, 4 &amp; 5</b>	Handover
<b>6, 7 &amp; 9-16</b>	Instant
<b>8</b>	24 Hour

Table 2: Zone Default Settings



The example given in this quick reference guide is a simplified description of how to configure the panel. This system offers many other programmable features which are described in detail in the *Solution- 16 Installation Manual (MA880I)*.

## Installer's Programming Commands

There are several commands that can be invoked to perform the functions as listed below. These commands only operate while you are in the Installer's Programming Mode. To invoke the command, enter in the corresponding numerical code then press the **AWAY** button.

<i>Command</i>	<i>Description</i>
<b>958</b>	Enable and Disable Zone Status Mode When Using Hand Held Programmer
<b>959</b>	Test Programming Key
<b>960</b>	Exit Installer's Programming Mode
<b>961</b>	Reset To Factory Default Settings (Contact ID Format)
<b>962</b>	Copy The Panel Memory To The Programming Key
<b>963</b>	Copy The Programming Key Data To The Panel Memory
<b>964</b>	Wipe Programming Key
<b>965</b>	Set Defaults For Domestic Dialling Reporting Format
<b>966</b>	Enable and Disable Automatic Stepping Of Locations During Programming
<b>999</b>	This Command Displays The Control Panel's "Software Version" Number When Using The Hand Held Programmer

*Table 3: Installers Programming Commands*

## Installer Code Functions

Installer Code functions are designed to allow the installer to perform various system tests without the need to know a Master Code.

The **INSTALLER CODE** is entered followed by a **FUNCTION** digit then the **AWAY** button to activate the particular function.

**INSTALLER CODE** + **FUNCTION** + **AWAY**

These functions can only be carried out while the system is in the disarmed state.

<i>Function</i>	<i>Description</i>
<b>0</b>	Reserved
<b>1</b>	Reserved
<b>2</b>	Set Number Of Days Until The First Test Report
<b>3</b>	Event Memory Recall
<b>4</b>	Walk Test Mode
<b>5</b>	EDMSAT - Satellite Siren Service Mode
<b>6</b>	Reserved
<b>7</b>	Turning Telephone Monitor Mode On and Off
<b>8</b>	Reserved
<b>9</b>	Reserved

*Table 4: Installer Code Functions*

## Master Code Functions

Master Code functions are designed to allow those users that have the appropriate access level to perform certain functions of a supervisory level. These functions can only be carried out while the system is in the disarmed state.

The **MASTER CODE** is entered followed by a **FUNCTION** digit then the **AWAY** button to activate the particular function.



<i>Function</i>	<i>Description</i>
<b>0</b>	Arming or Disarming Both Areas At The Same Time (Partitioning Only)
<b>1</b>	Changing and Deleting User Codes
<b>2</b>	Changing Domestic Phone Numbers
<b>3</b>	Event Memory Recall
<b>4</b>	Walk Test Mode
<b>5</b>	Turning Outputs On and Off
<b>6</b>	Setting The Date and Time
<b>7</b>	Turning Day Alarm On/Off (Software Version 1.10 Only)
<b>8</b>	Setting Zones For STAY Mode 2
<b>9</b>	Reserved

*Table 5: Master Code Functions*

## Hold Down Functions

Hold down functions have been incorporated to allow easy activation of specific operations. When a button is held down for two seconds, two beeps will be heard and a particular function will operate. The hold down functions are listed below.

<i>Function</i>	<i>Description</i>
<b>AWAY</b>	Arm The System In AWAY Mode
<b>STAY</b>	Arm The System In STAY Mode 1
<b>0</b>	Arm The System In STAY Mode 2
<b>1</b>	Horn Speaker Test
<b>2</b>	Bell Test
<b>3</b>	Strobe Test
<b>4</b>	Turning Day Alarm On and Off (Software Version 1.20 Onwards)
<b>5</b>	Fault Analysis Mode
<b>6</b>	Initiate Modem Call
<b>7</b>	Reset Latching Outputs
<b>8</b>	Codepad ID and Beeper Tone Change
<b>9</b>	Initiate Test Report

*Table 6: Hold Down Functions*

## User Code Functions

Function	Description
<b>0</b>	Arming or Disarming Both Areas At The Same Time (Partitioning Only)

*Table 7: User Code Functions*

## Fault Analysis Mode

There are various system faults that can be detected by the control panel. When any of these are present the FAULT indicator will begin to flash and the codepad will beep once every minute. Hold the **5** button down for two seconds until two beeps are heard. The STAY and AWAY indicators will begin to flash in unison with the FAULT indicator. One or more zone indicators (1-8) will illuminate to indicate the current fault(s). Refer to the following table below.

Zone Indicator	Description
<b>1</b>	Low Battery
<b>2</b>	Date and Time
<b>3</b>	Sensor Watch
<b>4</b>	Horn Speaker Disconnected
<b>5</b>	Telephone Line Fault
<b>6</b>	E <sup>2</sup> Fault
<b>7</b>	Zone 16 In Alarm – Partitioned Systems Only
<b>8</b>	Communications Failure

*Table 8: Fault Types*

## How To Test The Dialler

Telephone monitor mode allows the codepad to be used for a visual representation of data transmissions between the control panel and the base station receiver. The dialling sequence is also shown in this mode.

The codepad will beep once every two seconds while telephone monitor mode is turned on regardless of whether the system is in Installer's Programming Mode or normal operating mode. The first five zone indicators are used to display the progressive steps for a transmission to the base station receiver.

### How To Turn Telephone Monitor Mode ON

1. Enter your **INSTALLER CODE** followed by **7** and the **AWAY** button. Three beeps will be heard and the codepad will beep once every two seconds whilst this mode is active.

Zone LED	Event
<b>1</b>	Telephone Line Seized
<b>2</b>	Dialling Phone Number
<b>3</b>	Handshake Received
<b>4</b>	Data Is Being Transmitted
<b>5</b>	Kiss Off Received
<b>None</b>	Telephone Line Released

*Table 9: Telephone Monitor Mode Indications*

### How To Turn Telephone Monitor Mode Off

1. Enter your **INSTALLER CODE** followed by **7** and the **AWAY** button. Two beeps will be heard and the codepad will cease beeping once every two seconds.

Location 000 - 015

Primary Telephone Number

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Location 016 - 031

Secondary Telephone Number

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Location 032 - 047

Callback Telephone Number

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Location 048

Dialling Format

- |                                     |                                       |
|-------------------------------------|---------------------------------------|
| 1 = Australian DTMF                 | 4 = International DTMF                |
| 2 = Australian Decadic              | 5 = Reversed Decadic                  |
| 3 = Alternate DTMF & Decadic (AUST) | 6 = Alternate DTMF & Reversed Decadic |

1
---

Location 049

Handshake Tone

- |                                   |                           |
|-----------------------------------|---------------------------|
| 1 = HI-LO Handshake (Contact ID)  | 4 = No Handshake Required |
| 2 = 1400 Hz (Ademco TX @ 1900 Hz) | 5 = Pager                 |
| 3 = 2300 Hz (Sescoa TX @ 1800 Hz) |                           |

1
---

Location 050

Transmission Format

- |                              |                            |                        |
|------------------------------|----------------------------|------------------------|
| 1 = Contact ID               | 6 = 4 + 1 Pulsed Expanded  | 11 = Domestic          |
| 2 = 4 + 2 Expressed          | 7 = 3 + 1 Pulsed Universal | 12 = Basic Pager       |
| 3 = 4 + 2 Pulsed             | 8 = 3 + 1 Pulsed Expanded  | 13 = Reserved          |
| 4 = 4 + 2 Pulsed + Checksum  | 9 = Reserved               | 14 = PET Alpha Pager   |
| 5 = 4 + 1 Pulsed + Universal | 10 = Reserved              | 15 = Synthesised Voice |

1
---

Location 051

Transmission Speed

- |                        |                            |
|------------------------|----------------------------|
| 1 = 1 Pulse / Second   | 4 = 20 Pulses / Second     |
| 2 = 10 Pulses / Second | 5 = 20 Pulses / Second FDL |
| 3 = 15 Pulses / Second | 6 = 40 Pulses / Second     |

2
---

Location 052 - 055

Subscriber ID Number

0	0	0	0
---	---	---	---

Location 056 - 062

Installer Code

1	2	3	4	15	15	15
---	---	---	---	----	----	----

Location 063

Ring Count

- |   |
|---|
| 15 = Answering Machine Bypass 1                                       |
| 14 = Answering Machine Bypass 2 (New - Software Version 1.37 Onwards) |

8
---

Location 064 - 319

User Codes

<p><i>User Code 3</i>      Location 080 - 087</p> <table border="1"> <tr> <td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>0</td> </tr> </table>	15	15	15	15	15	15	15	0	<p><i>User Code 1</i>      Location 064 - 071</p> <table border="1"> <tr> <td>2</td><td>5</td><td>8</td><td>0</td><td>15</td><td>15</td><td>15</td><td>8</td> </tr> </table>	2	5	8	0	15	15	15	8	<p><i>User Code 2</i>      Location 072 - 079</p> <table border="1"> <tr> <td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>0</td> </tr> </table>	15	15	15	15	15	15	15	0
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<p><i>User Code 6</i>      Location 104 - 111</p> <table border="1"> <tr> <td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>0</td> </tr> </table>	15	15	15	15	15	15	15	0	<p><i>User Code 4</i>      Location 088 - 095</p> <table border="1"> <tr> <td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>0</td> </tr> </table>	15	15	15	15	15	15	15	0	<p><i>User Code 5</i>      Location 096 - 103</p> <table border="1"> <tr> <td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>0</td> </tr> </table>	15	15	15	15	15	15	15	0
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<p><i>User Code 9</i>      Location 128 - 135</p> <table border="1"> <tr> <td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>0</td> </tr> </table>	15	15	15	15	15	15	15	0	<p><i>User Code 7</i>      Location 112 - 119</p> <table border="1"> <tr> <td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>0</td> </tr> </table>	15	15	15	15	15	15	15	0	<p><i>User Code 8</i>      Location 120 - 127</p> <table border="1"> <tr> <td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>0</td> </tr> </table>	15	15	15	15	15	15	15	0
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<p><i>User Code 12</i>      Location 152 - 159</p> <table border="1"> <tr> <td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>0</td> </tr> </table>	15	15	15	15	15	15	15	0	<p><i>User Code 10</i>      Location 136 - 143</p> <table border="1"> <tr> <td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>0</td> </tr> </table>	15	15	15	15	15	15	15	0	<p><i>User Code 11</i>      Location 144 - 151</p> <table border="1"> <tr> <td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>0</td> </tr> </table>	15	15	15	15	15	15	15	0
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<p><i>User Code 15</i>      Location 176 - 183</p> <table border="1"> <tr> <td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>0</td> </tr> </table>	15	15	15	15	15	15	15	0	<p><i>User Code 13</i>      Location 160 - 167</p> <table border="1"> <tr> <td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>0</td> </tr> </table>	15	15	15	15	15	15	15	0	<p><i>User Code 14</i>      Location 168 - 175</p> <table border="1"> <tr> <td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>0</td> </tr> </table>	15	15	15	15	15	15	15	0
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<p><i>User Code 18</i>      Location 200 - 207</p> <table border="1"> <tr> <td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>0</td> </tr> </table>	15	15	15	15	15	15	15	0	<p><i>User Code 16</i>      Location 184 - 191</p> <table border="1"> <tr> <td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>0</td> </tr> </table>	15	15	15	15	15	15	15	0	<p><i>User Code 17</i>      Location 192 - 199</p> <table border="1"> <tr> <td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>0</td> </tr> </table>	15	15	15	15	15	15	15	0
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<p><i>User Code 21</i>      Location 224 - 231</p> <table border="1"> <tr> <td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>0</td> </tr> </table>	15	15	15	15	15	15	15	0	<p><i>User Code 19</i>      Location 208 - 215</p> <table border="1"> <tr> <td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>0</td> </tr> </table>	15	15	15	15	15	15	15	0	<p><i>User Code 20</i>      Location 216 - 223</p> <table border="1"> <tr> <td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>0</td> </tr> </table>	15	15	15	15	15	15	15	0
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<p><i>User Code 22</i>      Location 232 - 239</p> <table border="1"> <tr> <td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>0</td> </tr> </table>	15	15	15	15	15	15	15	0	<p><i>User Code 23</i>      Location 240 - 247</p> <table border="1"> <tr> <td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>15</td><td>0</td> </tr> </table>	15	15	15	15	15	15	15	0									
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<i>User Code 24</i>	Location 248 - 255	15	15	15	15	15	15	15	0
<i>User Code 27</i>	Location 272 - 279	15	15	15	15	15	15	15	0
<i>User Code 30</i>	Location 296 - 303	15	15	15	15	15	15	15	0

<i>User Code 25</i>	Location 256 - 263	15	15	15	15	15	15	15	0
<i>User Code 28</i>	Location 280 - 287	15	15	15	15	15	15	15	0
<i>User Code 31</i>	Location 304 - 311	15	15	15	15	15	15	15	0

<i>User Code 26</i>	Location 264 - 271	15	15	15	15	15	15	15	0
<i>User Code 29</i>	Location 288 - 295	15	15	15	15	15	15	15	0
<i>User Code 32</i>	Location 312 - 319	0	15	15	15	15	15	15	1

Location 320 - 327  
*Auxiliary Code 1*

15	15	15	15	15	15	15	15	2
----	----	----	----	----	----	----	----	---

Location 328 - 335  
*Auxiliary Code 2*

15	15	15	15	15	15	15	15	2
----	----	----	----	----	----	----	----	---

Location 336 - 337  
*Day Alarm Mask*

<b>Location 336</b>	1 = Zone 1 2 = Zone 2 4 = Zone 3 8 = Zone 4	<b>Location 337</b>	1 = Zone 5 2 = Zone 6 4 = Zone 7 8 = Zone 8
---------------------	--	---------------------	--

1	0
---	---

Location 338  
*Code Retries*

6
---

Location 339  
*EOL Resistor Value*

1 = 1K	5 = 3K9	9 = 10K	13 = Reserved
2 = 1K5	6 = 4K7	10 = 12K	14 = Reserved
3 = 2K2	7 = 5K6	11 = 22K	15 = Split EOL (3K3/6K8)
4 = 3K3	8 = 6K8	12 = Reserved	For 16 Zone Operation

4
---

Location 340 - 467  
*Zones*

<i>Zone 1</i>	Location 340 - 347	2	0	0	0	1	3	0	1
<i>Zone 2</i>	Location 348 - 355	1	0	0	0	1	3	0	1
<i>Zone 3</i>	Location 356 - 363	1	0	0	0	1	3	0	1
<i>Zone 4</i>	Location 364 - 371	1	0	0	0	1	3	0	1
<i>Zone 5</i>	Location 372 - 379	1	0	0	0	1	3	0	1
<i>Zone 6</i>	Location 380 - 387	0	0	0	0	1	3	0	1
<i>Zone 7</i>	Location 388 - 395	0	0	0	0	1	3	0	1
<i>Zone 8</i>	Location 396 - 403	12	0	0	0	1	3	3	1
<i>Zone 9</i>	Location 404 - 411	0	0	0	0	1	3	0	1
<i>Zone 10</i>	Location 412 - 419	0	0	0	0	1	3	0	1
<i>Zone 11</i>	Location 420 - 427	0	0	0	0	1	3	0	1
<i>Zone 12</i>	Location 428 - 435	0	0	0	0	1	3	0	1
<i>Zone 13</i>	Location 436 - 443	0	0	0	0	1	3	0	1
<i>Zone 14</i>	Location 444 - 451	0	0	0	0	1	3	0	1
<i>Zone 15</i>	Location 452 - 459	0	0	0	0	1	3	0	1
<i>Zone 16</i>	Location 460 - 467	0	0	0	0	1	3	0	1

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Zone Type</i>	<i>Zone Option</i>	<i>Zone Pulse Count</i>	<i>Zone Pulse Count Time</i>	<i>Event Code Hundreds Digit</i>	<i>Event Code Tens Digit</i>	<i>Event Code Units Digit</i>	<i>Dialler Channel</i>

Each zone contains eight locations, which are divided into two groups of four. The first four locations determine how the zone operates, while the second four locations contain the dialler reporting information.

*Zone Types*

There are fifteen different zone types to choose from. Each zone can be programmed as any of the zone types listed in the table below.

<i>Zone Type</i>	<i>Description</i>	<i>Zone Type</i>	<i>Description</i>
<b>0</b>	Instant	<b>8</b>	Delay-1 + Isolated In STAY Mode 1
<b>1</b>	Handover	<b>9</b>	Delay-2 + Isolated In STAY Mode 1
<b>2</b>	Delay-1	<b>10</b>	Delay-3 + Isolated In STAY Mode 1
<b>3</b>	Delay-2	<b>11</b>	Delay 4 + Isolated In STAY Mode 1
<b>4</b>	Delay-3	<b>12</b>	24 Hour Burglary
<b>5</b>	Delay-4	<b>13</b>	24 Hour Fire
<b>6</b>	Instant + Isolated In STAY Mode 1	<b>14</b>	Chime Only
<b>7</b>	Handover + Isolated In STAY Mode 1	<b>15</b>	Zone Not Used

*Zone Options*

<i>Zone Option</i>	<i>Description</i>
<b>1</b>	Lockout Siren
<b>2</b>	Lockout Dialler
<b>4</b>	Silent Alarm
<b>8</b>	Sensor Watch

*Zone Pulse Count Settings*

The pulse count settings for each zone can be programmed between 0 - 15.

*Zone Pulse Count Time*

Zone pulse count time is the time frame or period over which the number of pulses must register.

<i>20 ms Loop Response Time Zone Pulse Count Time</i>		<i>150 ms Loop Response Time Zone Pulse Count Time</i>	
<b>0</b>	0.5 Second	<b>8</b>	20 Seconds
<b>1</b>	1 Second	<b>9</b>	30 Seconds
<b>2</b>	2 Seconds	<b>10</b>	40 Seconds
<b>3</b>	3 Seconds	<b>11</b>	50 Seconds
<b>4</b>	4 Seconds	<b>12</b>	60 Seconds
<b>5</b>	5 Seconds	<b>13</b>	90 Seconds
<b>6</b>	10 Seconds	<b>14</b>	120 Seconds
<b>7</b>	15 Seconds	<b>15</b>	200 Seconds

*Zone Descriptions*

Use this table as a reference to indicate what each zone is connected to.

<i>Zone</i>	<i>Description</i>	<i>Zone</i>	<i>Description</i>
<b>1</b>		<b>9</b>	
<b>2</b>		<b>10</b>	
<b>3</b>		<b>11</b>	
<b>4</b>		<b>12</b>	
<b>5</b>		<b>13</b>	
<b>6</b>		<b>14</b>	
<b>7</b>		<b>15</b>	
<b>8</b>		<b>16</b>	

Location 468 - 469

*Bypass Codes (Zones 1 To 8)*

9	9
---	---

Location 470 - 471

*Bypass Codes (Zones 9 To 16)*

9	9
---	---

Location 472 - 473

*Trouble Codes (Zones 1 To 8)*

9	9
---	---

Location 474 - 475

*Trouble Codes (Zones 9 - 16)*

9	9
---	---

Location 476 - 479

*Codepad Duress*

1	2	1	1
---	---	---	---



Location 634 - 635 <i>Exit Time For STAY Mode 1</i>	Location 634 Location 635	Increments Of 1 Second (0 - 15 Sec's) Increments Of 16 Seconds (0 - 240 Sec's)	<input type="text" value="12"/> <input type="text" value="3"/>
Location 636 - 637 <i>Exit Time For STAY Mode 2</i>	Location 636 Location 637	Increments Of 1 Second (0 - 15 Sec's) Increments Of 16 Seconds (0 - 240 Sec's)	<input type="text" value="12"/> <input type="text" value="3"/>
Location 638 - 639 <i>Entry Guard Time For STAY Mode</i>	Location 638 Location 639	Increments Of 1 Second (0 - 15 Sec's) Increments Of 16 Seconds (0 - 240 Sec's)	<input type="text" value="12"/> <input type="text" value="3"/>
Location 640 - 641 <i>Codepad Lockout Time</i>	Location 640 Location 641	Increments Of 1 Second (0 - 15 Sec's) Increments Of 16 Seconds (0 - 240 Sec's)	<input type="text" value="0"/> <input type="text" value="0"/>
Location 642 - 643 <i>Sensor Watch Time</i>	Location 642 Location 643	Increments Of Days (Tens Digit) Increments Of Days (Units Digit)	<input type="text" value="0"/> <input type="text" value="0"/>
Location 644 - 649 (Software Version 1.10 Only) <i>System Date</i>	Location 644 Location 645 Location 646 Location 647 Location 648 Location 649	Day Of The Week (Sun = 1 Sat = 7) Month Of The Year (Jan = 1 Dec = 12) Day Of The Month (Tens Digit) Day Of The Month (Units Digit) Current Year (Tens Digit) Current Year (Units Digit)	<input type="text" value="1"/> <input type="text" value="1"/> <input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="9"/> <input type="text" value="5"/>
Location 644 - 649 (New - Software Version 1.20 Onwards) <i>System Date</i>	Location 644 Location 645 Location 646 Location 647 Location 648 Location 649	Day Of The Month (Tens Digit) Day Of The Month (Units Digit) Month Of The Year (Tens Digit) Month Of The Year (Units Digit) Current Year (Tens Digit) Current Year (Units Digit)	<input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="9"/> <input type="text" value="5"/>
Location 650 - 653 <i>Auto Arming Time</i>	Location 650 Location 651 Location 652 Location 653	Hour Of The Day (Tens Digit) Hour Of The Day (Units Digit) Minute Of The Day (Tens Digit) Minute Of The Day (Units Digit)	<input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/>
Location 654 <i>Pre Arming Alert Time</i>	Location 654	Increments Of Minutes (0 - 15 Min's)	<input type="text" value="5"/>
Location 655 <i>Pre Alert Time For Timed Output</i>	Location 655	Increments Of Minutes (0 - 15 Min's)	<input type="text" value="5"/>
Location 656 - 659 <i>Auto Operation Of The Timed Output</i>	Location 656 Location 657 Location 658 Location 659	Hour Of The Day (Tens Digit) Hour Of The Day (Units Digit) Minute Of The Day (Tens Digit) Minute Of The Day (Units Digit)	<input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/>
Location 660 <i>Siren Run Time</i>	Location 660	Increments Of Minutes (0 - 15 Min's)	<input type="text" value="10"/>
Location 661 <i>Siren Sound Rate (Slow &lt;-Sound-&gt; Fast)</i>			<input type="text" value="7"/>
Location 662 (Software Version 1.10 - 1.37) <i>Swinger Shutdown Count For Siren and Dialler</i>			<input type="text" value="0"/>
Location 662 (New - Software Version 1.40) <i>Swinger Shutdown Count For Siren</i>			<input type="text" value="0"/>

Location 663 <i>Dialler Options 1</i>	1 = Enable Dialler Reporting Functions 2 = Enable Remote Arming Via The Telephone 4 = Enable Upload/Download Via Alarm Link 8 = Terminate "Alarm Link" Session On Alarm	5
Location 664 <i>Dialler Options 2</i>	1 = Send Open/Close Reports Only If A Previous Alarm Has Occurred 2 = Enable First To Open/Last To Close Reporting (Partitioned Systems Only) 4 = Send Open/Close Reports When In STAY Mode 8 = Enable Answering Machine Bypass Only When System Is Armed <b>(New - Software Version 1.31 Onwards)</b>	0
Location 665 <i>System Options 1</i>	1 = Enable Forced Arming 2 = Enable EDM Smart Lockout 4 = Enable Monitoring Of Horn Speaker 8 = Enable Horn Speaker Beeps For Remote Control Operation	1
Location 666 <i>System Options 2</i>	1 = Enable Radio Key/Keyswitch Interface or Night Arm Station 2 = Enable Handover Delay To Be Sequential 4 = Enable Codepad Panic To Be Silent 8 = Enable Codepad Tamper To Be Silent	2
Location 667 <i>System Options 3</i>	1 = Enable The Main Codepad To Display Data For Area #1 2 = Enable External Modem Module For Alarm Link Operation 4 = Enabled = AC Fail In One Hour, Disabled = AC Fail In Two Minutes 8 = Enable Pulse Count Handover	0
Location 668 (Software Version 1.10 Only) <i>System Options 4</i>	1 = Delay Siren Until Transmission Is Complete 2 = Enable Resetting Of Sirens From All Areas (Partitioned Systems Only) 4 = Enable Auto Arming In AWAY Mode 8 = Enable Auto Arming In STAY Mode	0
Location 668 (New - Software Version 1.20 Onwards) <i>System Options 4</i>	1 = Delay Siren Until Transmission Is Complete 2 = Enable Resetting Of Sirens From All Areas (Partitioned Systems Only) 4 = Ignore AC Mains Fail (New - Software Version 1.30 Onwards) 8 = Enable Auto Arming In STAY Mode	0
Location 669 (Software Version 1.10 Only) <i>Consumer Options 1</i>	1 = Enable Entry Guard Delay In STAY Mode 2 = Enable Operation Of Sirens & Strobe In STAY Mode 4 = Code Only To Isolate 8 = Enable Codepad Extinguish Mode	2
Location 669 (New - Software Version 1.20 Onwards) <i>Consumer Options 1</i>	1 = Enable The STAY LED To Display Day Alarm ON/OFF State 2 = Enable Operation Of Sirens & Strobe In STAY Mode 4 = Partitioned Codepad - AUX LED To Display Telephone Line In Use 8 = Enable Codepad Extinguish Mode	2
Location 670 <i>Consumer Options 2</i>	1 = Enable "User Code + 0 + AWAY" Function To Arm/Disarm All Areas 2 = Enable Single Button Arming In AWAY, STAY Mode 1 and STAY Mode 2 4 = Enable Single Button Disarming From STAY Mode 1 and STAY Mode 2 8 = Enable Alarm Memory Reset On Disarm	2
Location 671 <i>DTMF Command Module Options</i>	1 = Enable Access Into Installer's Programming Mode 2 = Enable Access To Installer Code Functions 4 = Enable Disarming Of System Via User Codes and Auxiliary Code Operations 8 = Enable Access To Master Code Functions	0
Location 672 (Software Version 1.10 Only) <i>Expansion Board Type</i>	1 = Eight Zone Expansion Board 2 = Eight Channel Output Board 4 = Momentary Keyswitch Input 8 = Latching Keyswitch Input	0
Location 672 (New - Software Version 1.20 Onwards) <i>Expansion Board Type</i>	1 = Eight Zone Expansion Board 2 = Eight Channel Output Board 3 = Momentary Keyswitch Input 4 = Latching Keyswitch Input 5 = Momentary Arm Only In AWAY Mode 6 = Momentary Arm Only In STAY Mode 7 = Momentary Arm Only In STAY Mode 2 8 = Momentary Disarm Only 9 = Momentary Arm Only Area 4 10 = Momentary Disarm Area 4 11 = Momentary Arm/Disarm Area 4 12 = Latching Arm/Disarm Area 4	0

Location 673

Telephone Line Fault Options

1 = Operate The FAULT Indicator When Telephone Line Fails  
 2 = Sound Speaker, Bell & Strobe When System Is Armed  
 4 = Sound Speaker, Bell & Strobe When System Is Disarmed  
 Note: Options 2 and 4 Must Be Used In Conjunction With Option 1  
 (EG: Program a 1, 3 or 5)

Location 674 - 675

Open/Close Code For Area 2

Location 676 - 677

Open/Close Code For Area 3

Location 678 - 679

Open/Close Code For Area 4

Location 680 - 683

Subscriber ID Number For Area 2

Location 684 - 687

Subscriber ID Number For Area 3

Location 688 - 691

Subscriber ID Number For Area 4

Location 692 - 699

Zone Allocations For Area 1

Location 700 - 707

Zone Allocations For Area 2

Location 708 - 715

Zone Allocations For Area 3

Location 716 - 723

Zone Allocations Fore Area 4

Location 724 - 755

User Code Allocations

Location 724 Areas For User #1	Location 725 Areas For User #2	Location 726 Areas For User #3	Location 727 Areas For User #4
Location 728 Areas For User #5	Location 729 Areas For User #6	Location 730 Areas For User #7	Location 731 Areas For User #8
Location 732 Areas For User #9	Location 733 Areas For User #10	Location 734 Areas For User #11	Location 735 Areas For User #12
Location 736 Areas For User #13	Location 737 Areas For User #14	Location 738 Areas For User #15	Location 739 Areas For User #16
Location 740 Areas For User #17	Location 741 Areas For User #18	Location 742 Areas For User #19	Location 743 Areas For User #20
Location 744 Areas For User #21	Location 745 Areas For User #22	Location 746 Areas For User #23	Location 747 Areas For User #24
Location 748 Areas For User #25	Location 749 Areas For User #26	Location 750 Areas For User #27	Location 751 Areas For User #28
Location 752 Areas For User #29	Location 753 Areas For User #30	Location 754 Areas For User #31	Location 755 Areas For User #32

Location 756

Printer Output Baud Rate

- 1 = 300 Baud
- 2 = 600 Baud
- 4 = 1200 Baud
- 8 = 2400 Baud

2

Location 757 (New - Software Version 1.40)

Swinger Shutdown Count For Dialler

0

Location 897 (New - Software Version 1.37 Onwards)

System Options 5

- 1 = Enable - Send "Test" Report After Siren Reset
- 2 = Enable Control Panel To Power Up In Disarmed State
- 4 = Enable Internal Crystal To Keep Time (New - Software Version 1.40)
- 8 = Reserved

0

Location 898 - New From Software Version 1.33 Onwards

System Options 6

- 1 = Enable Busy Tone Detection For Domestic Dialling
- 2 = Enable "Kiss-Off" Detection For Domestic Dialling
- 4 = Extend Acknowledge Tone Detection From 30 - 60 Seconds
- 8 = If Battery Has Failed, Enable Dynamic Battery Test Only On Arming  
(New - Software Version 1.35 Onwards)

3

Location 900

Disable Factory Default

- 0 = Defaulting Enabled
- 15 = Defaulting Disabled

0

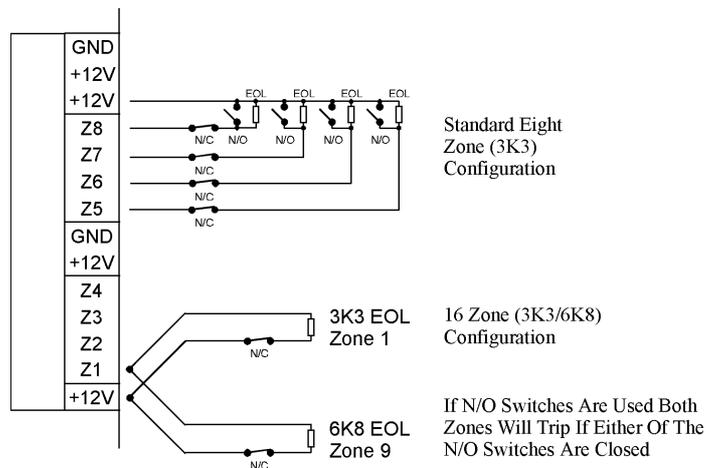
Location 901 - 904

System Time

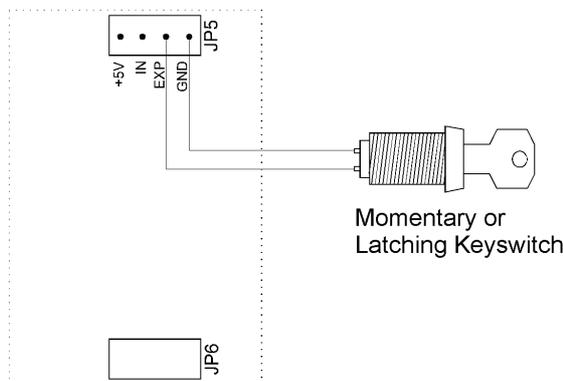
- |              |                                 |
|--------------|---------------------------------|
| Location 901 | Hour Of The Day (Tens Digit)    |
| Location 902 | Hour Of The Day (Units Digit)   |
| Location 903 | Minute Of The Day (Tens Digit)  |
| Location 904 | Minute Of The Day (Units Digit) |

0 0 0 0

### Connections For Split EOL Resistors For 16 Zone Operation



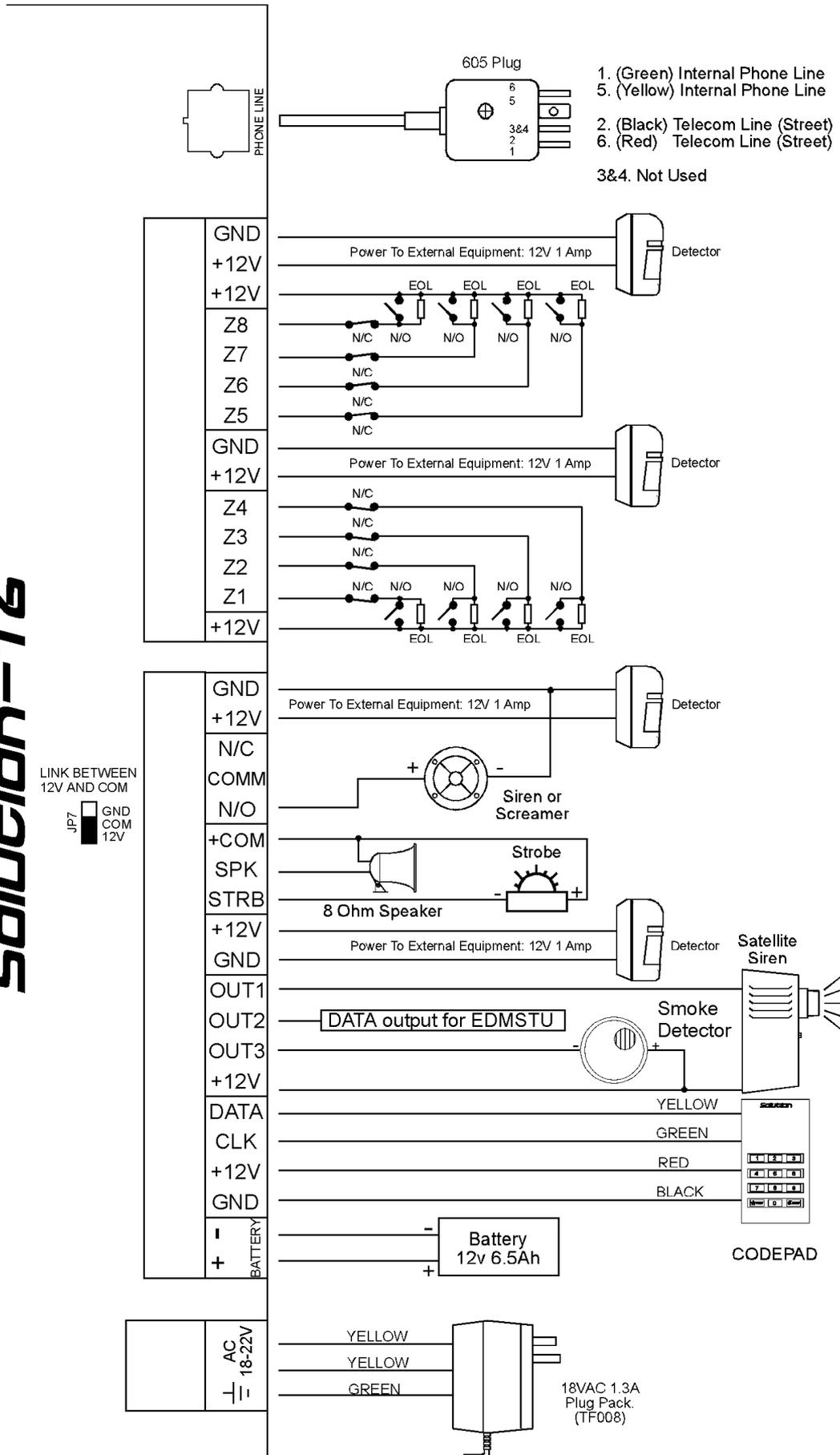
### Connection For Momentary Or Latching Keyswitch



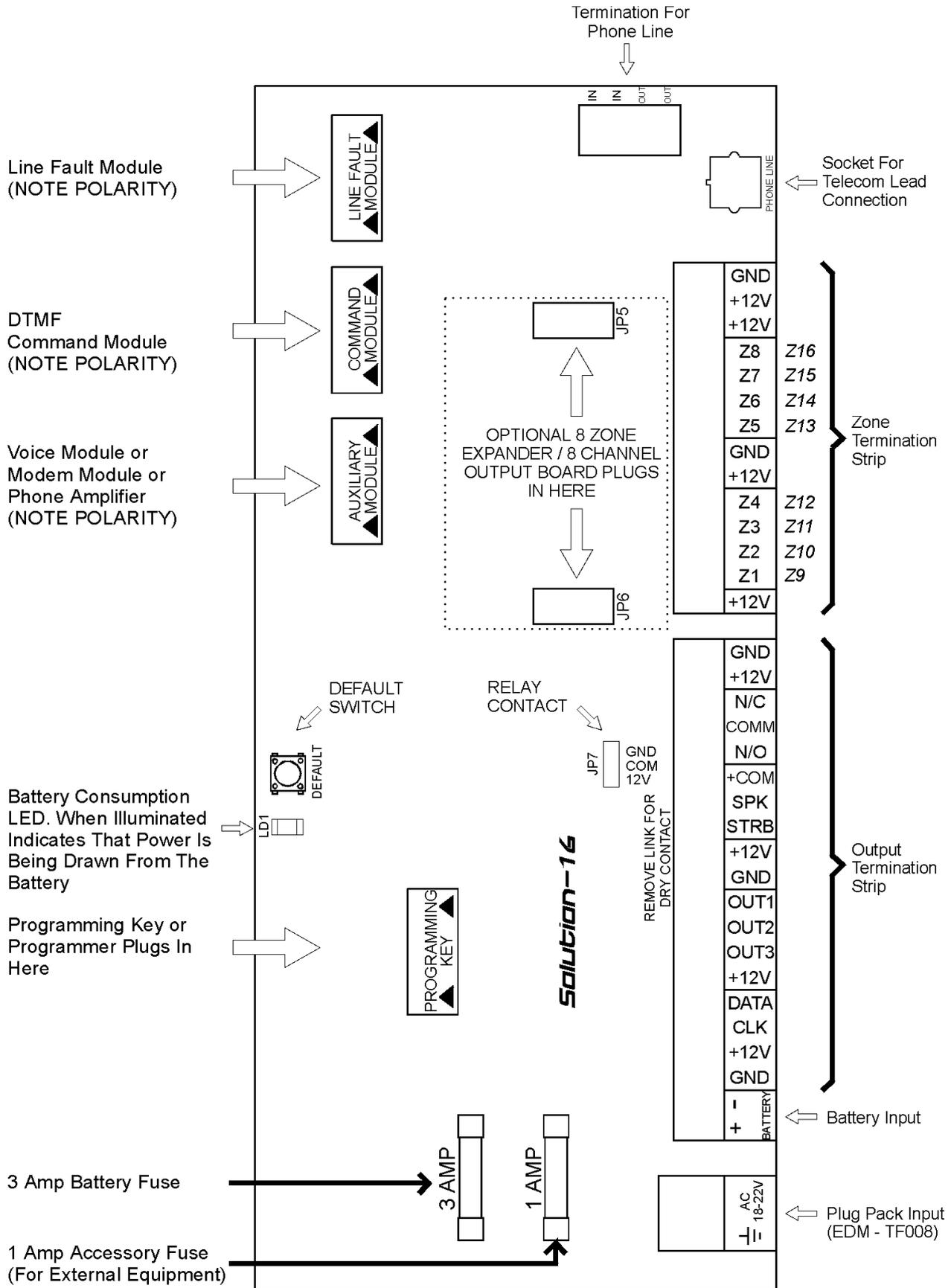
To enable the connection for a momentary or latching keyswitch on the above diagram, refer to "LOCATION 672" under Expansion Board Type to program these options.

Wiring Diagram

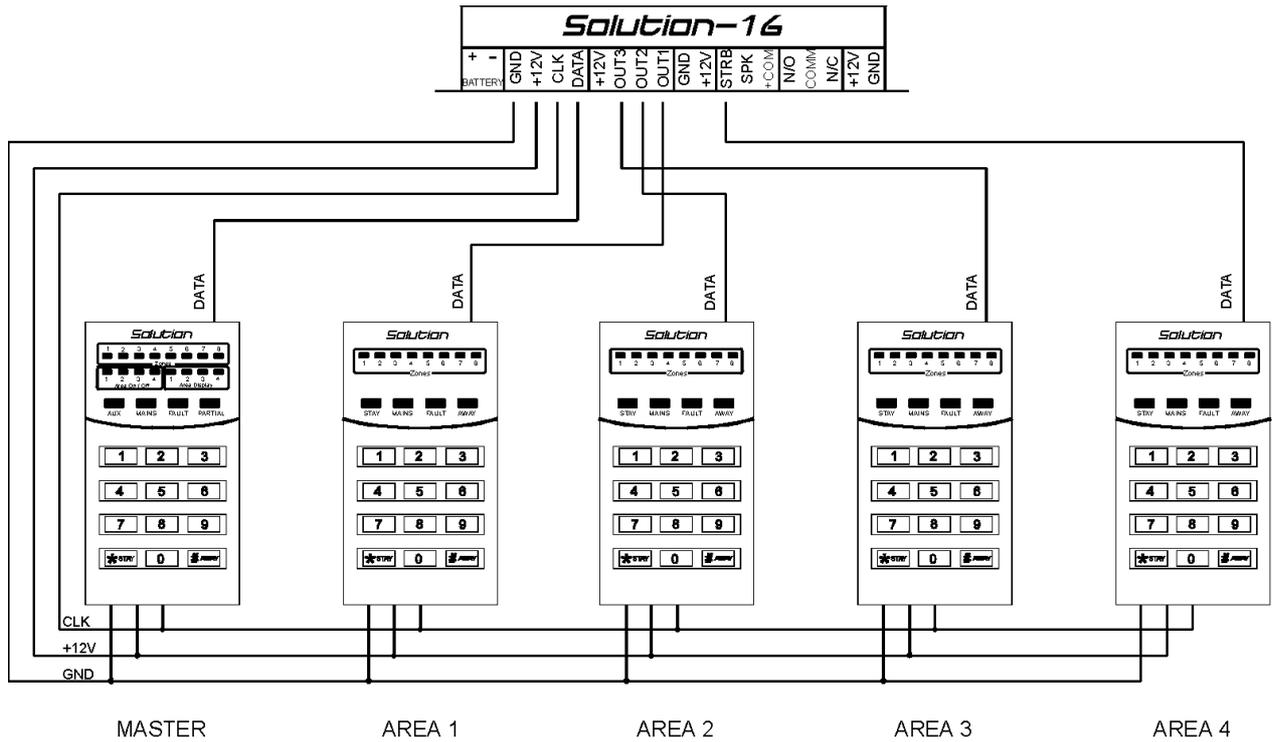
**Solution-16**



Component Overlay

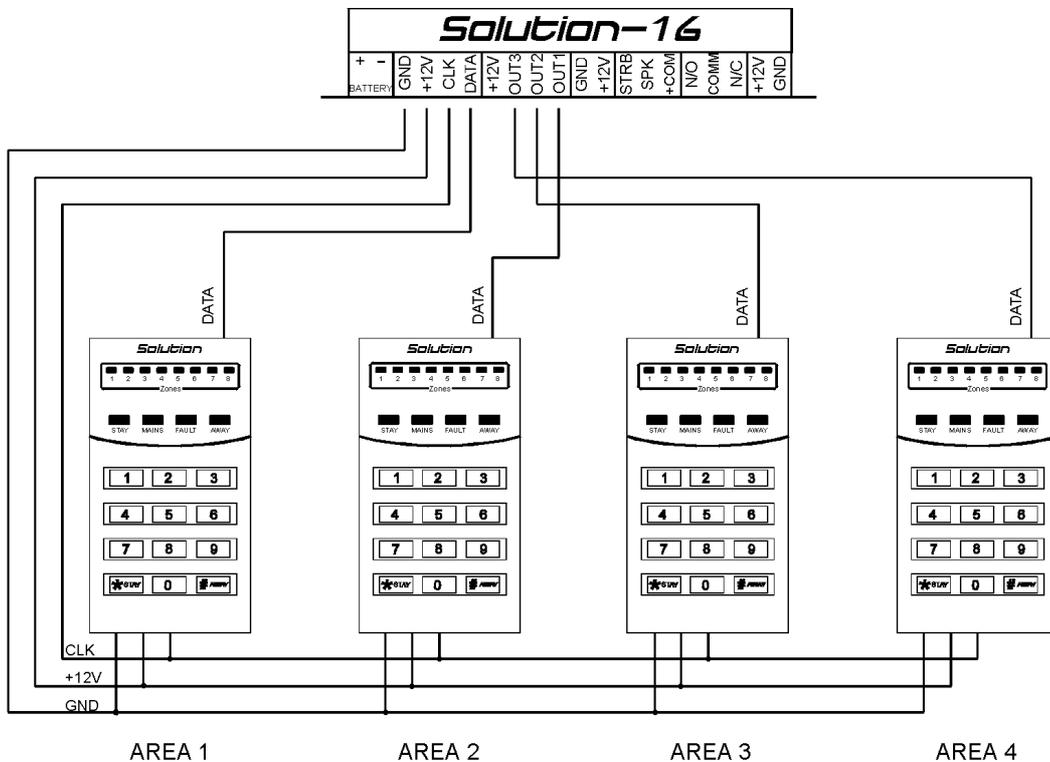


Codepad Connections (Partitioning)



The following locations must be programmed for the "Area Addressable (CP500A)" codepads to function correctly

- OUT1 - LOCATION 540 = 6, 541 = 0
- OUT2 - LOCATION 546 = 6, 547 = 1
- OUT3 - LOCATION 552 = 6, 553 = 2
- OUT4 - LOCATION 558 = 6, 559 = 3



The following locations must be programmed for the "Area Addressable (CP500A)" codepads to function correctly.

- LOCATION 667, Enable Option 1 - Main Codepad To Display Data For Area 1
- OUT1 - LOCATION 540 = 6, 541 = 1,      OUT2 - LOCATION 546 = 6, 547 = 2
- OUT3 - LOCATION 552 = 6, 553 = 3

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Dear Customer,

This Quick Reference Guide is supplied as a very limited document intended only to provide basic installer information. With this information you should be able to make the equipment operational in its simplest form provided you already have a basic understanding of the product. Installers who intend to make repeated installations are urged to purchase the full 200+ page installation manual which contains a wealth of information, diagrams and details the many outstanding features and benefits of the product.

Due to the size of this manual it is no longer practical for it to be included with every panel purchase. The cold hard facts are if the installation manual were to be included then the basic panel purchase price would increase to cover the extra costs.

The savings in panel costs will be multiplied with every new purchase and the benefits of having a detailed reference manual will save you countless dollars during your installation and service activities. Our environment also benefits from this policy as many installers would simply discard the surplus manuals. The cost of their disposal to the community, the trees required to produce the manuals in the first place and even the increased packaging costs all of which you the customer would be paying for.

Our surveys have found that 95% of installers are repeat product users and that there is nothing to be gained by having to pay for a manual with every panel. Instead we have made the installation manual a tool which is tax free to purchase and 100% tax deductible as a cost incurred in earning income.

It is obvious that the advantages of one manual for one installer greatly outweigh the disadvantages of not supplying an installation manual with every panel. I hope that this brief explanation shows that our intent is to save you money while still maintaining a superior standard of technical documentation.

Yours Sincerely

**Meinrad Formosa**

Managing Director

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